

REMARKS

Applicant thanks the Examiner for the very thorough consideration given the present application.

Claims 1-19 are now present in this application. Claims 1, 7, 13 and 18 are independent. By this amendment, claims 1-3, 7-9, 13-15, 18 and 19 are amended. No new matter is involved. Support for the coil swelling suppression features added to the claims is found throughout Applicant's originally filed Application, including, for example, in the summary of the invention on pages 4 and 5, and in the detailed disclosure of the invention on pages 7-10. Support for the amendment to claims 2, 8 and 14 is found throughout Applicant's originally filed disclosure, including the description of the insert injection molded base on page 7, second through fifth paragraphs, of the specification.

Reconsideration of this application is respectfully requested.

Rejections under 35 U.S.C. §103

Claims 1-11, 18 and 19 stand rejected under 35 U.S.C. §103(a) as being unpatentable over JP-14028570 (JP '570) in view of U.S. Patent 5,751,085 to Hayashi. This rejection is respectfully traversed.

A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

Because the rejection is based on 35 U.S.C. §103, what is in issue in such a rejection is "the invention as a whole," not just a few features of the claimed invention. Under 35 U.S.C.

§103, " [a] patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." The determination under §103 is whether the claimed invention as a whole would have been obvious to a person of ordinary skill in the art at the time the invention was made. See In re O'Farrell, 853 F.2d 894, 902, 7 USPQ2d 1673, 1680 (Fed. Cir. 1988). In determining obviousness, the invention must be considered as a whole and the claims must be considered in their entirety. See Medtronic, Inc. v. Cardiac Pacemakers, Inc., 721 F.2d 1563, 1567, 220 USPQ 97, 101 (Fed. Cir. 1983).

In rejecting claims under 35 U.S.C. § 103, it is incumbent on the Examiner to establish a factual basis to support the legal conclusion of obviousness. See, In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the Examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one of ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal Inc. v. F-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These

showings by the Examiner are an essential part of complying with the burden of presenting a *prima facie* case of obviousness. Note, *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be suggested or taught by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1970). All words in a claim must be considered in judging the patentability of that claim against the prior art. *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

A showing of a suggestion, teaching, or motivation to combine the prior art references is an “essential evidentiary component of an obviousness holding.” *C.R. Bard, Inc. v. M3 Sys. Inc.*, 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232(Fed. Cir. 1998). This showing must be clear and particular, and broad conclusory statements about the teaching of multiple references, standing alone, are not “evidence.” See *In re Dembicza*k, 175 F.3d 994 at 1000, 50 USPQ2d 1614 at 1617 (Fed. Cir. 1999).

Moreover, it is well settled that the Office must provide objective evidence of the basis used in a prior art rejection. A factual inquiry whether to modify a reference must be based on objective evidence of record, not merely conclusory statements of the Examiner. See, *In re Lee*, 277 F.3d 1338, 1343, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002).

Furthermore, during patent examination, the PTO bears the initial burden of presenting a *prima facie* case of unpatentability. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). If the PTO fails to meet this burden, then the Applicant is entitled to the patent. Only when a *prima facie* case is made, the burden shifts to the applicant to come forward to rebut such a case.

Claims 1, 7 and 18, as amended, clearly patentably define over the applied art. None of the two applied references discloses or suggests the positively recited features of claims 1-11, 18 and 19. Claim 1 recites a combination of features including (1) a swelling suppressing rotator having an upper rotor surface, a lower rotor surface, and an outer circumferential rotor surface inserted onto the rotational shaft to rotate and having a resin base that forms all of the upper, lower and outer circumferential surfaces of the rotator, and (2) a coil which is positioned in the rotator below the upper surface of the rotator; and (3) wherein the resin base suppresses expansion of the coil and prevents the coil from colliding with the upper case during surface mount heating of the vibration motor for connection to a substrate. Claim 7 positively recites a combination of features including (1) a swelling suppressing rotator formed upon a circumference of the rotational shaft and made of resin in which the coil is placed that covers all of the back side and outer circumference side of the coil, (2) the coil recessed into the rotator so that the coil is firmly fixed when heated, and (3) wherein the resin suppresses expansion of the coil and prevents the coil from colliding with the upper case during surface mount heating of the vibration motor for connection to a substrate. Claim 18 positively recites a combination of features, including (1) a coil having a top side, a bottom side and an outer circumference side, (2) a swelling suppressing

rotator placed upon a circumference of the rotational shaft to accept the coil so that all of the side and outer circumference side of the coil are covered by the rotator, and (3) wherein the rotator suppresses expansion of the coil and prevents the coil from colliding with the case during surface mount heating of the vibration motor for connection to a substrate.

These combinations features are neither disclosed nor suggested by either of the two applied references, taken alone or in combination with one another.

JP ‘570 clearly has no concept of the claimed rotator structure or of the coil swelling suppressing feature thereof. Nor does Hayashi. In fact, Hayashi does not even deal with vibration motors. Instead, Hayashi only concerns “electric motors which are required to rotate at high speeds, such as a scanner motor for driving a polygon mirror, and more particularly to an axial gap type electric motor having a dynamic pressure gas bearing.” – col. 1, lines 6-10. Nor does Hayashi’s rotor coil assembly 37 have the claimed construction.

Hayashi’s stator has a number of coils 33 embedded in a molded material 35 that has a flat surface 34a opposite to rotor magnet 43, thereby avoiding irregularities that cause turbulent flow of air during rotation of the rotor assembly 37 to reduce windage loss – see col. 6, lines 15-22.

Neither applied reference discloses or suggests a rotator structure with the claimed structural features or the claimed coil expansion suppression features. Because of this, the claimed structural features and the claimed coil expansion suppression features are not obvious to one of ordinary skill in the art, and the only possible grounds for his obviousness rejection of

claims 1-11, 18 and 19 are either improper speculation or improper hindsight reconstruction of Applicant's invention solely based on Applicant's disclosure.

Further evidence of the hindsight reconstruction basis of this rejection is the statement in the rejection that "[E]ven though Hayashi's resin base coil structure is used as a stator instead of a rotor as in the claimed invention, . . . those skilled in the art would understand that the important teaching of Hayashi ref is that by covering the coils' upper circumference, i.e., the coils' side that faces the permanent magnet, with resin would eliminate the irregularities of the coils so that the base resin structure having a rendered flat upper face that facing the magnet. As a result, the coils are secured and completely enclosed to prevent the coil from any thermal expansion due to generated heat in the coils; thus the even gap between the coils and the magnet is maintained" (emphasis added).

Applicant respectfully submits that one of ordinary skill in the art would not be motivated to turn to Hayashi's high-speed air bearing motor to modify JP '570 because neither reference discloses a problem that the other reference solves. For example, JP '570 does not disclose a coil expansion problem nor does Hayashi.

JP '570 does not disclose a windage problem so one of ordinary skill in the art would not be motivated to turn to Hayashi to solve a non-existent windage problem in JP '570.

JP '570 does not disclose a molded stator, so one of ordinary skill in the art would not be properly motivated to turn to Hayashi to form a molded stator.

Hayashi does not disclose a molded rotor, so one of ordinary skill in the art would not be properly motivated to turn to Hayashi to modify JP '570's rotor.

The Office Action continues by stating that Hayashi's resin base core structure is an analogous art with respect to the claimed invention because the resin based coil structure can be used as a stator or a rotor.

With respect to the analogous art assertion, Applicant respectfully submits for a reference to be analogous it must be in the same field as applicant's endeavor or is reasonably pertinent to the problem to which the Applicant is concerned - see *In re Kahn*, 78 USPQ2d 1329, 1335 (Fed. Cir. 2006). In this regard, Applicants respectfully submits that Hayashi is not in the same field of endeavor as either JP '570 or Applicant's invention because Hayashi is not a vibration motor, and the problem to which Hayashi is directed is not the same as the problem addressed by Applicant or by JP '570. In this regard, Hayashi does not discloses that it is concerned with coil expansion that interferes with the proper operation of the stator, and Hayashi's use of a molded coil stator is concerned with reducing windage between the molded stator and the rotor assembly 37, which has not been shown to be relevant to the construction or operation of Applicant's vibration motor or to the vibration motor of JP '570.

Lastly, JP '570 apparently works well in its present configuration. Moreover, the Examiner may not pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art. Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve Inc., 796 F.2d 443, 448, 230 USPQ 416, 419 (Fed. Cir. 1986), cert. denied, 484 U.S. 823 (1987) and In re Kamm, 452 F.2d 1052, 1057, 172 USPQ 298, 301-2 (CCPA 1972), and obviousness cannot be established by locating references which describe various aspects of

appellant's invention without also providing evidence of the motivating force which would impel one skilled in the art to do what appellants have done. Ex parte Levengood, 28 USPQ2d 1300, 1302 (Bd. App. & Int. 1993). Here the Office Action fails to present any persuasive evidence of such a motivating force to modify JP '570, as suggested.

Accordingly, the Office Action fails to make out a *prima facie* case of obviousness of the claimed invention based on JP '570 and Hayashi, neither of which is concerned with the problem addressed and solves (and claimed) by Applicant.

Reconsideration and withdrawal of this rejection of claims 1-11, 18 and 19 are respectfully requested.

Claim 12 stands rejected under 35 U.S.C. §103(a) as unpatentable over JP '570 and Hayashi in view of U.S. Patent 6,359,364 to Yamaguchi et al. ("Yamaguchi"). This rejection is respectfully traversed.

Initially, Applicant notes that claim 7, from which claim 12 depends, patentably defines over the art applied in the rejection of claim 7 (i.e., JP '570 in view of Hayashi), for reasons stated above. Moreover, Yamaguchi is not being applied to remedy the deficiencies noted above with respect to the art applied in the rejection of claim 7.

Accordingly, even if it were obvious to modify the art applied in the rejection of claim 7, the resulting modified version of that art would neither disclose nor suggest the invention recited in claim 12.

Reconsideration and withdrawal of this rejection of claim 12 are respectfully requested.

Claims 13-17 stand rejected under 35 U.S.C. §103(a) as being unpatentable over JP '570 in view of Hayashi and Yamaguchi. This rejection is respectfully traversed.

Complete discussions of the Examiner's rejections are set forth in the Office Action, and are not being repeated here.

Claims 13-17, as amended, clearly patentably define over the applied art. None of the three applied references disclose the positively recited features of claims 13-17. Independent claim 13 recites a combination of features including (1) a coil, (2) a swelling suppressing rotator inserted onto the rotational shaft and having a base made of resin that covers all of the top side and outer circumference side of the coil, the coil having an upper portion formed at a position lower than top side of the rotator, and (3) wherein the resin suppresses expansion of the coil and prevents the coil from colliding with the upper case during surface mount heating of the vibration motor for connection to a substrate. None of the applied references disclose or suggest such a combination of features, for reasons discussed above.

Accordingly, even if it were obvious to modify the JP '570-Hayashi reference combination in view of Yamaguchi, as suggested, the resulting modified version thereof would neither disclose nor render obvious the claimed invention.

Thus, the Office Action fails to make out a *prima facie* case of obviousness of the claimed invention.

Reconsideration and withdrawal of this rejection of claims 13-17 are respectfully requested.

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Additional Cited References

Because the remaining references cited by the Examiner have not been utilized to reject the claims, but have merely been cited to show the state of the art, no comment need be made with respect thereto.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Robert J. Webster, Registration No. 46,472, at (703) 205-8000, in the Washington, D.C. area.

Prompt and favorable consideration of this Amendment is respectfully requested.

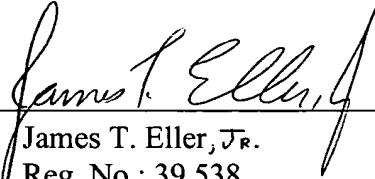
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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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